

**IRTAD**

**SPECIAL REPORT**

**THE AVAILABILITY OF SEAT BELT WEARING  
DATA  
IN OECD MEMBER COUNTRIES (1995)**

**OECD-RTR  
Roar Transport  
Research Programme**

**DEPARTMENT OF TRANSPORT  
Great Britain  
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## **PREFACE**

**In 1995, Mr. Wilding (GB) conducted a survey into the availability of seat belt wearing rates data to focus on a common set of data between countries which could be supplied to IRTAD.**

**Information was supplied by Member countries and at the following OC meetings, a Working Paper on the compilation and evaluation of this data was discussed. The results of this working process are summarised in the present “Special Report”.**

**As a result of this work, it was decided at the 16th OC meeting held in March 1997 to include seat belt wearing data in IRTAD. However, it was agreed that the data should be limited to a subset containing information on drivers of passenger cars, with a split by rural roads, urban roads and motorways. The data should be compiled as a time series. The delegates were aware of the fact that there were significant differences, not only in coverage, but also in sampling procedures and data periodicity. In order to agree on a common set of data between countries that could be supplied to IRTAD, such differences would have to be accepted.**

**Nevertheless, on the basis of the report, it is recommended to launch an international co-operation in the field of harmonising the methodology underlying the national estimates of seat belt wearing rates. Such an approach should focus on regional variation and the effect of season, day of week, time of day on national results as well as differences in sample size.**

**Harmonisation of sampling standards would also improve the IRTAD data quality as far as seat belt wearing rates are concerned.**

**Sven Krarup Nielsen  
Chairman of the IRTAD Operational Committee**

# THE AVAILABILITY OF SEAT BELT WEARING DATA IN OECD MEMBER COUNTRIES (1995)

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# **THE AVAILABILITY OF SEAT BELT WEARING DATA IN OECD MEMBER COUNTRIES (1995)**

## **A. BACKGROUND**

1. It was agreed at the eleventh meeting of the Operational Committee in Vienna, September 1994, that it would be a useful exercise to survey the availability of seat belt wearing data in OECD Member countries. Seat belts save lives. The injury-reducing effect of seat belts is estimated to be around 50 per cent for fatal and serious injuries. Seat belts are most effective in frontal and roll-over collisions, and especially in low-speed accidents in urban areas. In all countries, it is ironic that wearing rates are lower for journeys in urban areas, where research indicates that the injury-reducing effect of seat belt use is most effective. The scientific assessment of the injury-reducing effect of seat belt wearing is well documented. The recent report by the European Transport Safety Council - "Seat belts and Child Restraints - October 1996" - provides a useful summary. However, despite legislation, the potential benefits of use are diluted by incorrect use. In particular, adult misuse commonly occurs due to the incorrect positioning of the shoulder part of the belt and also excessive slack between the shoulder part and the seat belt wearer. For children, inappropriate anchorage points, and also incorrect restraint systems for the height and weight of the child, significantly lower the injury-reducing effect. However, the decision to wear a seat belt, if available, is the most important single action that can be taken by a vehicle occupant to minimise the risk of personal injury in a road accident. The availability of:

- Shoulder-height seat-belt adjusters which allow a comfortable fit for occupants of varying heights;
- Seat-belt retractors which lock the belt automatically in a crash or severe deceleration;
- pre-tensioners and webbing grabbers which minimise the amount of slack belt and consequently reduce the risk of a front-seat occupant hitting the steering wheel or dashboard,

are an important contribution to the overall range of secondary safety features to be found in new cars. However, although technology has improved the performance of seat belts, the most significant contribution to occupant protection is to encourage drivers and passengers to wear the seat belt in the first place.

2. The introduction of legislation concerning the fitting of front and rear seat belts in cars, as well as legislation concerning the wearing of seat belts and its enforcement through fines and/or driving licence penalty points, has an important bearing on the incidence of wearing of seat belt.

For some countries, the effect of the introduction of new penalty regulations is clear in their statistics on the wearing of seat belts. In addition, for many countries, the introduction of legislation on the wearing of seat belts has had a significant effect upon the average severity of injury for car occupants involved in crashes, although reduction of injury in road accidents has been minimal. Consequently, publicity campaigns to encourage the use of seat belts in cars often emphasises the number of lives saved by the use of seat belts.

## **B. AIMS**

3. The purpose of this inquiry was not to collect data on wearing rates but to focus on data availability. The aim is to provide a summary description of data availability, combined with a brief qualitative description of sampling procedures and size, legislation, exemptions within the legislation, and the penalties enforced for non-compliance with the law. Appendix A shows the questionnaire that was sent to OECD Member countries participating in the IRTAD system at the end of September 1994. The form shows that the scope of the investigation concentrated on:

- **FIVE VEHICLE TYPES** (cars, taxis, light vans, buses and coaches and heavy goods vehicles);
- **A MINIMUM REQUIREMENT FOR AGE GROUPS** (children, subject to a variable age definition, and adults);
- **THREE ROAD TYPES** (motorways, rural roads, and urban roads);
- **GENDER OF OCCUPANTS;**
- **SEATING POSITION** (driver, front seat passenger, and rear seat passenger).

4. Apart from gender, and seat position of occupant, there are bound to be definitional differences for other potential datasets, and it is difficult to quantify what such differences would imply for a comparison of seat-belt wearing rates between countries.

## **C. SURVEY RESPONSE**

5. Out of the 26 IRTAD participating countries, responses were received from 20 countries. The list of countries responding, during this initial phase of the survey, is shown in Appendix A, together with the telephone and telefax numbers of a contact point if users require more detail or data. This survey required more than a year to complete due in part to a desire to include as many countries as possible, and also the difficulty of establishing a contact with some countries which, because of geography and cost, are not able to attend operational committee meetings as frequently as others. It should be noted that in a survey of this nature, the process of checking the responses, and ensuring that they have been correctly interpreted is a slow process.

## **D. AVAILABILITY OF COMPARABLE DATA**

6. The level of detail in the responses varied a great deal, and it was clear that there are considerable differences in the range of data available for analysis. For some of the larger

countries, for the purposes of this review, it was necessary to report only national data availability and legislation and not to reflect variations at state or provincial level.

7. Out of the 20 responding countries only Greece and Portugal reported that, for practical purposes, data on the wearing of seat belts was not available. For the remaining 18 countries, the most commonly available data sets, interpreted somewhat liberally, are shown in the following table:

### CAR OCCUPANT Seat Belt Wearing Data Availability

Drivers	Front Seat Passengers (All)	Front Seat Passengers (Adult)	Front Seat Passengers (Child)	Rear Seat Passengers (All)	Rear Seat Passengers (Adult)	Rear Seat Passengers (Child)
<b>Data Available</b>						
Australia	Australia	Australia	Australia	Australia	Australia	Australia
Austria	Austria	Austria	Austria	Austria	Austria	Austria
Canada	Canada	Canada (>24 yrs)		Canada	Canada (>24 yrs)	
Czech R	Czech R.	Czech R	Czech R. (0 to 12 yrs)	Czech R.	Czech R	Czech R. (0 to 12 yrs)
Denmark				Denmark	Denmark	Denmark
Finland	Finland			Finland	Finland	Finland
France		France				
Germany	Germany	Germany	Germany (0 to 11 yrs)	Germany	Germany	Germany (0 to 11 yrs)
G. Britain	G. Britain	G. Britain	G. Britain	G. Britain	G. Britain	G. Britain
Hungary	Hungary	Hungary	Hungary	Hungary	Hungary	Hungary
Iceland	Iceland	Iceland	Iceland	Iceland	Iceland	Iceland
Japan	Japan					
Netherlands	Netherlands	Netherlands	Netherlands	Netherlands	Netherlands	Netherlands
N. Zealand	N. Zealand	N. Zealand	N. Zealand	N. Zealand	N. Zealand	N. Zealand
Norway				Norway	Norway	Norway
Spain	Spain	Spain	Spain (0 to 12 yrs)	Spain	Spain	Spain (0 to 12 yrs)
Sweden	Sweden	Sweden	Sweden (0 to 15 yrs)	Sweden	Sweden	Sweden (0 to 15 yrs)
U. States	U. States	U. States	U. States (0 to 15 yrs)			
<b>Data Not Available</b>						
	Denmark	Denmark	Canada	France	France	Canada
	France	Finland	Denmark	Japan	Japan	France
	Norway	Japan	Finland	U. States	U. States	Japan
		Norway	France			U. States
			Japan			
			Norway			

8. The table shows that, not surprisingly, the most commonly available data sets are for drivers and passengers in cars, broken down by seat position and age group. The age definition of 0 to 14 years for children is commonly adopted, but is narrower for Germany (0 to 11 years), Spain and the Czech Republic (0 to 12 years) and Sweden and the United States (0 to 15 years). The periodicity and sample size underlying these data sets vary considerably among responding countries, but sufficient information should be available to provide an indication of wearing rates in these countries during the past decade. The results show that from the sample of 20 responding countries, as of 1995:

- only Canada, France and Japan do not have monitoring systems in place to assess the safety issue of the use of restraints by children;
- only France, Japan and the United States do not have monitoring systems in place to assess the problem of lower wearing rates in rear passenger seats.

The use of occupant restraints in EU member countries is covered by legislation enshrined in Council Directives, but, despite this legislation, wearing rates vary significantly. Also, without exception, front seat wearing rates tend to be higher for front seats than for rear seats. In OECD Member countries responding to this survey a similar pattern emerges. Wearing rates for drivers on urban roads varied considerably. For example, rates of 85 per cent and over were reported for Canada, Germany, Great Britain and Sweden; and rates of 60 per cent or less were reported for the Czech Republic, Denmark, Hungary and the United States. On motorways or rural roads, Finland, France, Germany, Great Britain, Japan and Sweden reported car driver wearing rates of at least 90 per cent, but Austria, the Czech Republic, Hungary, the Netherlands and the United States reported rates of less than 80 per cent. For those countries that supplied additional information, the variation in rear seat wearing rates was extremely large, some reporting rates as low as 9 per cent. If lower wearing rates could generally be improved to at least the highest reported rates, there would be a significant improvement in road safety in OECD Member countries.

## **E. COUNTRY RESPONSE**

9. This section presents the agreed summaries of the detailed replies from each responding country, and shows details of data availability. They provide a starting point for further investigation for those interested in developing international accident data comparisons. The results are shown in the following table.



## CAR OCCUPANT SEAT BELT WEARING DATA AVAILABILITY

Data available							
Data not available							
	AUSTRALIA	AUSTRIA	CANADA	CZECH REPUBLIC	DENMARK	FINLAND	FRANCE
ALL AGE GROUPS						Front Seats Only	
CHILDREN	0 to 14 yrs	0 to 14 yrs	Not Separable	0 to 12 yrs	0 to 14 yrs	0 to 14 yrs Rear Seats Only	
ADULTS			> 24 yrs			Rear Seats Only	
MOTORWAYS						Front Seats Only ) not )	
RURAL ROADS						) separable )	
URBAN ROADS							
GENDER	Usually for adults only					Rear Seats Only	
DRIVER							
FRONT SEAT PASSENGER							
REAR SEAT PASSENGER							

	GERMANY	GREAT BRITAIN	GREECE	HUNGARY	ICELAND	JAPAN	NETHERLANDS
ALL AGE GROUPS							Some information available for a small subset of data
CHILDREN	0 to 11 yrs	0 to 14 yrs		0 to 14 yrs	0 to 14 yrs	Not Separable	Some information available for a small subset of data
ADULTS						Not Separable	
MOTORWAYS					No Motorways		
RURAL ROADS						) Not )	
URBAN ROADS						) Separable )	
GENDER	Adults Only						
DRIVER				) Not )			
FRONT SEAT PASSENGER				) Separable )			

REAR SEAT PASSENGER						
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### CAR OCCUPANT SEAT BELT WEARING DATA AVAILABILITY

Data available  
 Data not available

	NEW ZEALAND	NORWAY	PORTUGAL	SPAIN	SWEDEN	UNITED STATES
ALL AGE GROUPS						
CHILDREN	0 to 14 yrs	0 to 14 yrs		0 to 12 yrs	0 to 15 yrs	0 to 15 yrs
ADULTS						
MOTORWAYS				) ) Not		
RURAL ROADS				) Separable )		
URBAN ROADS						
GENDER	Adults Only					Over 4 years old only
DRIVER						
FRONT SEAT PASSENGER						
REAR SEAT PASSENGER						

## **F. SUPPLEMENTARY SURVEY (Data Quality)**

10. At the 14th meeting (Copenhagen 1996) of the operational committee, it was agreed that it would be useful to supplement the survey results with an additional survey of seat belt wearing data **quality** for car drivers on motorway and on urban and rural roads. This would help the committee decide whether available data for this subset of road users were sufficiently comparable, from a statistical point of view, to justify inclusion in the IRTAD system as a meaningful exposure measure. The details of this additional survey, and a summary of the replies are shown in Appendix B. It is clear from replies that sample sizes, national representation, and periodicity vary widely between countries for this subset of data which most countries claimed to be available. The following summarises some of the main points from this additional information.

### **FOR THOSE COUNTRIES THAT REPORTED**

- **Most countries now undertake annual surveys of some aspect of seat belt wearing behaviour:**  
The Czech Republic, Denmark, Spain, and the United States undertake occasional annual surveys. **(4 countries)**
- **Countries able to report car driver seat belt wearing data on motorways, rural roads, and urban roads (separately):**  
Austria, Czech Republic, Denmark, France, Germany, Hungary, Netherlands, Sweden, United States. **(9 countries)**
- **Countries able to report car driver seat belt wearing data on motorways:**  
Austria, Czech Republic, Denmark, France, Germany, Hungary, Japan, Netherlands, Sweden, United States **(10 countries)**
- **Countries able to report car driver seat belt wearing data on urban roads and rural roads (including or excluding motorways):**  
Australia, Austria, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary, Iceland, the Netherlands, New Zealand, Norway, Spain, Sweden, United States. **(16 countries)**
- **Countries able to report car driver seat belt wearing data on urban roads:**  
Australia, Austria, Canada, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary, Iceland, the Netherlands, New Zealand, Norway, Spain, Sweden, United States. **(17 countries)**
- Some countries, such as Germany and Austria, have an extensive regional representation of sites underlying the collection of their national estimates. But some countries, such as Great Britain, have a narrower regional representation for a roughly similar number of sites. National estimates for Great Britain are derived from sites at only two (town) locations. However, it is possible that there is little regional variation in smaller countries (compared to North America for example) for car driver and front seat passenger wearing rates, because national publicity campaigns and legislation are long established. They are also likely to have a more uniform impact within a smaller country. But for rear seat passengers it could be that regional variation within any country, regardless of size, is more significant because legislation is more recent and has had less time to influence attitudes. In addition, the perceived risk of injury is lower in the rear than in the front of a

car, which makes it more difficult to achieve high wearing rates and increases the scope for regional variability in rates. Consequently, within any one country, the variation in front-seat wearing rates is likely to be smaller than for rear-seat wearing rates, and the regional representation of a national seat belt survey is more likely to be a relevant issue for rear-seat wearing rates.

- Variations in rates between countries reflect different national attitudes to seat-belt wearing, reflecting differences in publicity campaigns, legislation and enforcement between member countries. The tables show the extent of the national variation in wearing rates on different roads (see responses to questions in Annex B).
- Between and within (some) countries, the annual sample of cars and their drivers varied considerably (see responses to questions 7A in Annex B which shows approximate annual sample size of cars surveyed and the range of sample size within country where provided). The effect of the sample variation upon comparability of estimates between countries, and also upon comparability of time series within countries is not known.

## **G. CONCLUSIONS**

11. International comparisons of injury (fatality) road accident data, such as in the IRTAD system, are enhanced by the availability of exposure data on population, vehicles and especially motor vehicle mileage. For many countries, the direct calculation of motor vehicle mileage from motor vehicle counts on network links is prohibitively expensive and is not available. Nevertheless, in principle, the calculation of accident or casualty rates provides a better basis for the international comparison of road accident records, and the relative effectiveness of national road safety policies between countries. Given the practical limitations to the availability of complete exposure data in the IRTAD system, an inquiry into the availability of data on the wearing of seat belts in member countries was seen as a useful start to open up access to additional exposure data to enhance the international comparison of injury accidents and fatalities. A much higher rate of seat-belt use in one country than another will obviously have some influence upon the comparison of the number of vehicle occupant casualties in accidents. Large changes in the rate, in response perhaps to legislative changes or enforcement in one country, will also influence trend comparisons between countries.

12. Variations in national methodology are likely to be large enough to make precise quantitative comparisons of wearing rates and exposure adjustments difficult. However, the significant differences in wearing rates reported by member countries implies that the results presented in this report should provide a useful qualification to the comparison of fatalities and fatality rates between IRTAD countries.

13. Most countries reported that data on the wearing of seat belts for car drivers on motorways and urban and rural roads was available. The supplementary survey, designed to indicate the statistical robustness of national estimates, indicates substantial variation in sample size, national representation, and periodicity. These are real limitations to international comparability; nevertheless, wearing data may provide a useful background for comparing road accident fatalities between countries and also a platform for the improved collection of data on the wearing of seat belts.

## **H. ADDENDUM**

At a more detailed level, beyond the scope of this review, seat belt wearing data for particular models of car can be useful for interpreting car safety ratings. Some countries are now producing rating systems, based upon road accident data, which reflect the degree to which the design and structure of a car, together with its secondary safety fittings, such as seat belts and air bags, protect the driver and passengers in an injury crash. The effect of car mass in an injury accident (in which occupants tend, in general, to be protected in proportion to the mass of their car), can be minimised by comparing cars of similar mass. Variations in protective ratings for cars of similar size should reflect the extent to which cars protect their occupants in crashes, if reasonable allowance is made for variations in the type of accidents and driver that each car model is exposed to. But they could also reflect the extent to which safety devices such as seat belts are deployed by occupants in cars. Although it is unlikely that, in any one country, seat-belt wearing behaviour by car occupants will vary between different car models of similar size, variations in warning systems and new ignition controls might have an effect on wearing rates in particular models of cars, and consequently on car safety rating systems.

# **APPENDIX A**

## **Detailed Evidence (1995 Survey)**

### **CONTENTS**

- A) Survey form**
- B) List of respondents**
- C) Respondent details**

**IRTAD: Seat Belt Wearing Survey**

1. Do you carry out seat belt wearing surveys in your country?
2. If so, are they based on roadside observation or telephone inquiry?
3. Please indicate in the following table what analyses are available from your survey?

<b>SEAT BELT WEARING SURVEY</b>	<b>Cars</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Country:</b>					
<b>Children</b> [Please define age bands]					
<b>Adults</b>					
<b>Road Type:</b>  Motorways Rural Roads Urban Roads					
<b>Gender of occupants</b>					
<b>Seating Position:</b>  Drivers Front seat passenger Rear seat passengers					

4. How many sampling sites are there in your seat belt wearing survey for each road class or vehicle type?
5. What is the sample size at each sampling site?
6. What are your country's seat belt laws?
7. What exemptions to your country's seat belt laws are there, if any?
8. What are the penalty systems in your country for seat belt offenses?

## **RESPONDENTS**

<b>COUNTRY</b>	<b>CONTACT</b>	<b>TELEPHONE AND FAX</b>	
<b>1. Australia</b>	<b>Chris Brooks</b>	<b>6162 747111</b>	<b>6162 747922</b>
<b>2. Austria</b>	<b>Robert Esberger</b>	<b>431 71770261</b>	<b>431 717709</b>
<b>3. Canada</b>	<b>Paul Gutoskie</b>	<b>1613 9981942</b>	<b>1613 9984831</b>
<b>4. Czech Republic</b>	<b>Josef Mikulik</b>	<b>42 54321 5050</b>	<b>42 54321 1215</b>
<b>5. Denmark</b>	<b>Sven Nielsen</b>	<b>45 33413303</b>	<b>45 33338511</b>
<b>6. Finland</b>	<b>Leena Sipinen</b>	<b>09 35894174700</b>	<b>47400</b>
<b>7. France</b>	<b>Yves Page</b>	<b>331 40818045</b>	<b>331 40818099</b>
<b>8. Germany</b>	<b>Ingrid Hass</b>	<b>492204 43431</b>	<b>492704 43673</b>
<b>9. Great Britain</b>	<b>Peter Wilding</b>	<b>44 171 2768775</b>	<b>44171 2768269</b>
<b>10. Greece</b>	<b>E. Papagiannis</b>	<b>7238-102</b>	
<b>11. Hungary</b>	<b>Peter Hollo</b>	<b>361 1669310</b>	<b>361 1669210</b>
<b>12. Iceland</b>	<b>Orn Thorvardarson</b>	<b>3541 622000</b>	<b>3541 627500</b>
<b>13. Japan</b>	<b>Katsumi Okamoto</b>	<b>813 35810141</b>	<b>813 35811923</b>
<b>14. Netherlands</b>	<b>Frank Poppe</b>	<b>3170 3209323</b>	<b>3170 3201261</b>
<b>15. New Zealand</b>	<b>Wayne Jones</b>	<b>644 3828300</b>	<b>644 3855699</b>
<b>16. Norway</b>	<b>Richard Muskaug</b>	<b>47 2207 3466</b>	<b>47 2207 3308</b>
<b>17. Portugal</b>	<b>Isabel de Bettencourt</b>	<b>3511 8140325</b>	<b>3511 8127767</b>
<b>18. Spain</b>	<b>Monica Colas</b>	<b>341 7423112</b>	<b>341 7418134</b>
<b>19. Sweden</b>	<b>Goran Nillson</b>	<b>4613 204000</b>	<b>4613 141436</b>
<b>20. United States</b>	<b>Bill Walsh</b>	<b>1202 3661503</b>	<b>1202 3667078</b>

**RESPONDENT DETAILS**

<b>SEAT BELT WEARING SURVEY</b> <b>Country: AUSTRALIA</b>	<b>Cars</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Children</b> General 0-6 months Under 1 year 1-4 years 5-7/8 years 8/9-14/16/17 years  Different surveys use slightly different age categories	Yes Some Some Some Some Some	Some Some Some Some Some Some	Some Some Some Some Some Some	Little	Little
<b>Adults</b> Some surveys specify age Bands	Yes	Yes	Yes	Little	Little
<b>Road Type:</b> Usually not specified  Motorways Rural Roads Urban Roads	Some Yes	Some	Some Yes		
<b>Gender of occupants</b> Usually only adults	Yes		Some		
<b>Seating Position:</b>  Drivers Front seat passenger Rear seat passengers	Yes Yes Yes	Yes Yes Yes	Some Some Some		

1. National estimates only available from the FORS Community Attitudes Survey - telephone based survey. Most states conduct observational roadside seat belt surveys. Larger states conduct surveys annually or biennially. Smaller states as resources allow but usually at least once every five years.
2. The community attitudes survey consisted of 1 039 interviews in 1990 and 1991.
3. **Legislation** - Some state variation. The wearing of seat belts and child restraints is compulsory in all states for those vehicles fitted with seat belts.
4. **Exemptions** - Drivers driving in reverse. Persons making door-to-door deliveries or collections traveling below 25km/h. Persons possessing a current medical certificate. Some vehicles not required to have seat belts fitted. If there is no child restraint available for a child weighing 9kgs or over they may travel in a rear seat.

5. **Penalties** - State laws vary. Infringement notices with fines vary from A\$70 to 165 plus 2 or 3 demerit points (out of 12). Where cases go to court, fines in some states range from A\$500 to 2000 plus a jail sentence.

6. **Notes**

*Taxis and Light Vans* - Some surveys differentiate vehicles in this way but the majority include them in the same category as cars. There have been more surveys of light vans and taxis in urban areas.

*Buses and Coaches* - Long distance buses and coaches have only been required to have seat belts fitted since 1994, therefore little information is available on seat belt wearing.

*Heavy Goods Vehicles* - These are not surveyed on a regular basis, although a study is currently being conducted.

*Rural Roads* - Some separate surveys cover rural areas.

*Urban Roads - Taxis* - There have been specific surveys of taxis in larger cities; New South Wales and in Melbourne and they have occasionally been a separate category in general metropolitan surveys.

<b>SEAT BELT WEARING SURVEY</b>	<b>Cars (incl.) Taxis</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Country: AUSTRIA</b>					
<b>Children</b> 0-14 years	Yes				
<b>Adults</b>	Yes				
<b>Road Type:</b>  Motorways Rural Roads Urban Roads	  Yes Yes Yes				
<b>Gender of occupants</b>	Yes				
<b>Seating Position:</b>  Drivers Front seat passenger Rear seat passengers	  Yes Yes Yes				

1. Periodic surveys (3 times a year) based upon roadside observation. In 1993 and 1994, 78 sampling sites (16 motorway, 30 rural, 32 urban).
2. The approximate sample size at each sampling site: Motorways and rural roads - 400 cars: Urban roads - 800 cars. In 1993 total data collected was: Motorways – 17 698 cars: Rural Roads – 36 208 cars: Urban roads – 80 912 cars.
3. **Legislation** - Front seat belt wearing compulsory since 1976. From 1984, rear seat belt wearing compulsory. From 1994 use of child-retaining seats obligatory.
4. **Exemptions** - Drivers of emergency vehicles, taxi drivers, handicapped drivers.
5. **Penalties** - Fine varying from Sch 100 to 300. Penalties for not wearing front seat belts introduced in 1984.

<b>SEAT BELT WEARING SURVEY</b>	<b>Cars</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Country: CANADA</b>					
<b>Children</b> 0-24 years 25-49 years 50+	Yes Yes Yes		Yes Yes Yes		
<b>Adults</b>					
<b>Road Type:</b> Motorways Rural Roads Urban Roads	Yes		Yes		
<b>Gender of occupants</b>	Yes		Yes		
<b>Seating Position:</b> Drivers Front seat passenger Rear seat passengers	Yes Yes Yes		Yes Yes Yes		

1. Two roadside seat belt surveys a year. June survey - Seat belt usage according to seating position of all occupants in cars and light trucks/vans. October survey - Seat belt usage of the driver, by gender and age, and daytime lights use.
2. 240 sample sites with an average sample size at each of 333 vehicles.
3. **Legislation** - Mandatory seat belt wearing laws in all provinces for vehicles equipped with belts.
4. **Exemptions** - In most provinces/territories: Driving in reverse, medical reasons, police transporting person in custody, delivery with frequent stops at speeds less than 40 km/h, Taxi cab drivers when carrying passengers, occupants of vehicles in which the seat belt is unavailable or not required.
5. **Penalties** - In all provinces/territories, on conviction, fines range from C\$25 to 1 000. In four provinces and one territory, drivers additionally receive 2 to 3 demerit points. Demerit point system proposed in most other provinces and one territory.

<b>SEAT BELT WEARING SURVEY</b>	<b>Cars</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Country: CZECH REPUBLIC</b>					
<b>Children</b> 0-12 years Children 12 and under have to sit in the rear passenger seat.	Yes				
<b>Adults</b>	Yes	Yes	Yes		
<b>Road Type:</b> Motorways Rural Roads Urban Roads	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes		
<b>Gender of occupants</b>	Yes	Yes	Yes		
<b>Seating Position:</b> Drivers Front seat passenger Rear seat passengers	Yes Yes Yes	Yes Yes Yes	Yes Yes		

1. Occasional surveys based on roadside observation. Latest data for 1995 produced by the Traffic Research Centre. Previous results were produced by Traffic Police.
2. Three to four sampling sites on different road types produced a sample of 4 282 vehicles in 1995.
3. **Legislation** - Since 1989, seat belt use is mandatory for drivers and passengers in rear and front seats. Child/baby seat use recently made mandatory. Children under 12 have to sit in the rear of the vehicle.
4. **Exemptions** - Medical grounds, persons less than 1.5 m in height, instructing on urban roads, drivers when reversing, taxis on urban roads, distribution vehicles, army/police vehicles.
5. **Penalties** - Fine up to 1 000 Czech crowns (infrequently used)

<b>SEAT BELT WEARING SURVEY</b>	<b>Cars</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Country: DENMARK</b>					
<b>Children</b> 0 to 9 months 9 months to 3 years 4 to 7 years 8 to 14 years	Yes				
<b>Adults</b> Greater than 15 years	Yes				
<b>Road Type:</b> Motorways Rural Roads Urban Roads	Yes Yes Yes				
<b>Gender of occupants</b>					
<b>Seating Position:</b> Drivers Front seat passenger Rear seat passengers	Yes Yes				

1. Roadside surveys to support publicity campaigns.
2. In 1993, 15 sites on motorways - total sample of 3 500 cars, 21 sites on rural roads - total sample of 5 000 cars, and 30 sites on urban roads - total sample of 3 000 in small towns and 6 000 in towns.
3. **Legislation** - Seat belt use mandatory in front and back seat of cars if fitted with seat belts. Estimated that nearly all cars are fitted with front seat belts but only 50 per cent fitted with rear seat belts. Children less than 3 years old do not have to wear seat belts. For 3 to 7 year olds, a child seat can be used instead.
4. **Exemptions** - Reverse driving, driving in parking areas, petrol stations, medical reasons, taxi drivers carrying passengers.
5. **Penalties** - Fine approximately DKK500.

<b>SEAT BELT WEARING SURVEY</b>	<b>Cars</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Country: FINLAND (1)</b>					
<b>Front seat belt survey (All age groups only)</b>	Yes		Yes		
<b>Road Type:</b> Motorways Rural Roads Urban Roads	Yes Yes		Yes Yes		
<b>Gender of occupants</b>					
<b>Seating Position:</b> Drivers Front seat passenger Rear seat passengers	Yes Yes		Yes Yes		

1. Roadside survey of cars and light vans only. Several dozen sampling sites generating 40 000 observations yearly.
2. **Legislation** - Driver and passenger must wear a seat belt if available in cars, small coaches and vans. Rear seat passengers in vans and small coaches do not have to wear seat belts. Children under 12 and under 1.5 metres must wear a child safety device if available or an adult seat belt. The driver or child's parent is responsible for restraint use by the child.
3. **Exemption** - Medical reasons, seat belt not fitted, police officer, motor vehicle inspector on duty, delivery services with stops not exceeding 100 metres, taxi or bus driver.
4. **Penalties** - On the spot fine of FIM 140. Or 2-6 day fine depending on offender's income.

<b>SEAT BELT WEARING SURVEY</b>	<b>Cars</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Country: FINLAND (2)</b>					
<b>Rear Seat Belt Survey</b>					
<b>Children</b> 0 to 5 years 6 to 14 years	Yes Yes	Yes Yes			
<b>Adults</b>	Yes	Yes			
<b>Road Type:</b>  Motorways Rural Roads Urban Roads	Yes				
<b>Gender of occupants</b>	Yes	Yes			
<b>Seating Position:</b>  Drivers Front seat passenger Rear seat passengers	Yes	Yes			

1. Roadside survey. Fifteen sampling sites in five cities producing 3 500 observations each year.
2. **Legislation** - Driver and passenger must wear a seat belt if available in cars, small coaches and vans. Rear seat passengers in vans and small coaches do not have to wear seat belts. Children under 12 and under 1.5 metres in height must wear a child safety device if available or an adult seat belt. The driver or child's parent is responsible for restraint use by the child.
3. **Exemption** - Medical reasons, seat belt not fitted, police officer, motor vehicle inspector on duty, delivery services with stops not exceeding 100 metres, taxi or bus driver.
4. **Penalties** - On the spot fine of FIM 140. Or 2-6 day fine depending on offender's income.

<b>SEAT BELT WEARING SURVEY</b>	<b>Cars</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Country: FRANCE</b>					
<b>Children</b>	No	No	No	No	No
<b>Adults</b>	Yes	No	No	No	No
<b>Road Type:</b> Motorways Rural Roads Urban Roads	Yes Yes Yes	No	No	No	No
<b>Gender of occupants</b>	No	No	No	No	No
<b>Seating Position:</b> Drivers Front seat passenger Rear seat passengers	Yes Yes No	No	No	No	No

1. Roadside observation. **National and departmental roads:** Three-stage sample design - Department, road sector and vehicle type carried out in a sample of 20 departments approximately 170 counting sites covering four types of road. **Motorways:** Observations taken on toll and non-toll roads. About 30 observation sites used. **Roads in urban areas.** Spread of cities in the North and South chosen.
2. **Legislation** - Mandatory use of seat belts: rear and front seats in passenger cars and vans. Mandatory use of child restraint system for children up to 10 years old.
3. **Exemptions** - Occupants whose height does not require a seat belt. Occupants with medical exemption. Occupants of emergency vehicles. Taxi drivers. Occupants of public service vehicles which stop frequently. Occupants of delivery service vehicles.
4. **Penalties** - FF230 fine and loss of one driving licence point for a non-belted driver.

<b>SEAT BELT WEARING SURVEY</b>	<b>Cars</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Country: GERMANY</b>					
<b>Children</b>  0 to 5 years 6 to 11 years	Yes Yes				
<b>Adults</b>	Yes				
<b>Road Type:</b>  Motorways Rural Roads Urban Roads	Yes Yes Yes				
<b>Gender of occupants</b>	Yes <sup>1</sup>				
<b>Seating Position:</b>  Drivers Front seat passenger Rear seat passengers	Yes Yes Yes				

<sup>1</sup> Adults only

1. Roadside observations annually since 1973 during one week of the year - since 1991 in East Germany. From 4 regions in West Germany and 4 regions in East Germany observations, in hourly time bands, are taken at different times of the day for different traffic flows on urban roads (rush hour, city, transit) and; on different days of the week for each road type. Urban roads - Tuesday, Wednesday; Rural Roads - Friday, Sunday; and Motorways – Thursday, Sunday. 5 600 observations on motorways, 4 800 on rural roads, 8 400 on urban roads each year in each region of the Republic
2. **Legislation** - Adults must wear seat belts in front and rear seats. Children (under 12 and less than 1.5 metres in height) must use a child restraint system.
3. **Exemptions** - Taxi drivers carrying passengers. Bus passengers. Delivery services. Driving in parking lots at low speed.
4. **Penalties** - Fine DM40.

<b>SEAT BELT WEARING SURVEY</b>	<b>Cars</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Country: GREAT BRITAIN</b>					
<b>Children</b>					
Front Seat 0 to 13/14 years	Yes <sup>1</sup>				
Rear Seat 0, 1 to 4, to 9, 10 to 13, 14 to 29, 30 to 59, and over 60 years	Yes <sup>1</sup>				
<b>Adults</b>	Yes <sup>1</sup>	Yes	Yes		
<b>Road Type:</b>					
Motorways	Yes				
Rural Roads	Yes				
Urban Roads					
<b>Gender of occupants</b>	Yes				
<b>Seating Position:</b>					
Drivers	Yes				
Front seat passenger	Yes				
Rear seat passengers	Yes				

<sup>1</sup> Also analysed by age of car. Cars registered since 1987 are required by law to have rear seat belts fitted.

1. Roadside bi-annual surveys, 32 sites in two extensive study areas, mostly at traffic signal junctions to facilitate observation. Weekday observations at all sites. Weekend observations at eight sites. Survey, since 1992, also records improper use of restraints.
2. **Legislation** - Since 1983, front seat belts must be worn, if available. Since 1987, new cars must be fitted with rear seat belts. Since 1989, children under 14 must wear rear seat belts or an appropriate restraint, and since 1991 adults and children over 14 must wear rear seat belts. Illegal to carry an unrestrained child in the front of any vehicle. Children under 3, in the front seat, must be in an appropriate child restraint.
3. **Exemptions** - Medical reasons. Collection and delivery services. Reversing. Drivers of taxis and private hire cars.
4. **Penalties** - Fixed fine (£20). If go to court, level 2 fine (max £500) or level 1 fine (max £200) for children in rear seats.

<b>SEAT BELT WEARING SURVEY</b>	<b>Cars</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Country: GREECE</b>					
<b>Children</b>					
<b>Adults</b>					
<b>Road Type:</b> Motorways Rural Roads Urban Roads					
<b>Gender of occupants</b>					
<b>Seating Position:</b> Drivers Front seat passenger Rear seat passengers					

1. There is no survey done in Greece. Road accident statistics in 1993 indicate that out of 19 564 drivers involved in 11 746 road traffic accidents only 5 912 drivers were wearing a safety belt.
2. **Legislation** - All passenger carrying vehicles and trucks under 3.5 tonnes GVW must have safety belts in the front seat. Passenger carrying vehicles first registered after 1/1/93 must have safety belts fitted in rear seats. May be extended to older cars in circulation. Seat belt wearing obligatory. Children under 12 must wear appropriate restraints.
3. **Exemptions** - Taxi and coach drivers carrying passengers. Medical exemptions. Pregnant women. Persons under 1.5 metres tall. Delivery services.
4. Penalties - Maximum fine 15 000 Drachmas.

<b>SEAT BELT WEARING SURVEY</b>	<b>Cars (incl.) Taxis</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Country: HUNGARY</b>					
<b>Children</b>  No Age bands	Yes				
<b>Adults</b>	Yes		Yes		
<b>Road Type:</b>  Motorways Rural Roads Urban Roads	Yes Yes Yes		Yes Yes Yes		
<b>Gender of occupants</b>					
<b>Seating Position:</b>  Drivers Front seat passenger Rear seat passengers	Yes Yes Yes		Yes Yes Yes		

1. Roadside and mobile observation. Three sites on urban roads, three sites on rural roads, and a mobile survey on motorways. At each site a sample of 1 000 vehicles is taken.
2. **Legislation** - Front seat belt wearing compulsory since 1977. From 1993, rear seat belt wearing compulsory, in vehicles fitted with seat belts, but only outside built-up areas.
4. **Exemptions** - Medical reasons. Driver reversing. Taxi drivers. Persons less 1.5 metres tall. Drivers carrying out special services on emergencies. Driver instructors.
5. **Penalties** - Maximum fine of 2 000 HUF.

<b>SEAT BELT WEARING SURVEY</b> <b>Country: ICELAND</b>	<b>Cars</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Children</b>  0 to 14 years	Yes				
<b>Adults</b>	Yes				
<b>Road Type:</b>  Motorways Rural Roads Urban Roads	No Yes Yes				
<b>Gender of occupants</b>					
<b>Seating Position:</b>  Drivers Front seat passenger Rear seat passengers	Yes Yes Yes				

1. Latest survey 1995. Roadside observation of 37 sample sites, sample size varying from 25 to 250 vehicles at each site.
2. **Legislation** - Every occupant must use a seat belt if fitted.
3. **Exemptions** - Minister makes exemptions for certain individuals.
4. **Penalties** - Fine of 2000 IKR.

<b>SEAT BELT WEARING SURVEY</b>	<b>Cars</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Country: JAPAN</b>					
<b>Children</b>					
<b>Data for All Age Groups Only</b>	Yes				
<b>Adults</b>					
<b>Road Type:</b>					
Motorways	Yes				
Rural Roads	Yes				
Urban Roads					
<b>Gender of occupants</b>					
<b>Seating Position:</b>					
Drivers	Yes				
Front seat passenger	Yes				
Rear seat passengers					

1. Roadside observation. Twice yearly. 100 motorway sites and 1 000 rural and urban road sites. About 1 000 cars are sampled at each motorway site and 2 000 to 3 000 at other road sites.
2. **Legislation** - Front seat belt wearing has been compulsory since 1985.
3. **Exemptions** - Drivers and passengers in emergency vehicles. Drivers reversing. Handicapped drivers. Drivers and passengers of exceptional height or size. Drivers and passengers in cars escorting or being escorted by other cars. Drivers and passengers engaged in delivery work. Drivers and passengers in election campaign cars.
4. **Penalties** - One driving licence penalty point for violations.

<b>SEAT BELT WEARING SURVEY</b>	<b>Cars</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Country: NETHERLANDS</b>					
All age groups only Passenger car occupants only (A supplementary questionnaire provides some analysis by age of occupant)	Yes (by age for a subset - about 10%-of the data)				
<b>Road Type:</b>  Motorways Rural Roads Urban Roads	Yes Yes Yes				
<b>Gender of occupants</b>	Yes				
<b>Seating Position:</b>  Drivers Front seat passenger Rear seat passengers	Yes Yes Yes				

1. Mostly annual roadside observation - cars only. Since 1968 - seat belt availability and use - front seat only. Since 1989 - rear seats. Since 1991 - a supplementary questionnaire to subset of observed drivers when one rear passenger > 12 present. Total of 48 sampling sites and an average 400 observations at each site.
2. **Legislation** - Since January 1971, new cars must be fitted with front seat belts. Since June 1975, front seat belts have to be used when available. Since January 1990, new cars must be fitted with rear seat belts, and from April 1992 they have to be worn when available.
3. **Exemptions** – Children under 12 and under 1.5 m tall, on front seat but have to sit in a child seat. Children over 3 and under 12, and under 1.5 m tall, on the back seat, have to use a child seat if available; otherwise a seat belt must be worn when available. Children under 3, on the back seat, have to use a child seat, if available, but do not have to wear a seat belt even if it is available. Persons under 1.5 m tall may use a 3 point belt as a lap belt. Taxi drivers transporting passengers. Persons living abroad with exemptions in their home country.
4. **Penalties** - Fine 80 Florins

<b>SEAT BELT WEARING SURVEY</b> <b>Country: NEW ZEALAND</b>	<b>Cars</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Children</b>					
0 to 7 years	Yes				
8 to 14 years	Yes				
0 to 4 years Child Restraint	Yes				
<b>Adults Over 15</b>	Yes				
<b>Road Type:</b>					
Motorways	No				
Rural Roads	Yes				
Urban Roads	Yes				
<b>Gender of occupants</b>	Yes*				
<b>Seating Position:</b>					
Drivers	Yes				
Front seat passenger	Yes				
Rear seat passengers	Yes				

\* Adults only

1. Roadside observation at 50 urban and 50 rural sampling sites for front-seat adults. 25 sites for rear-seat adults and children. At each sampling site, 100 front seat adults and rear seat adults are sampled, and 60 children are sampled.
2. **Legislation** - Children under 5 must be in an approved child restraint. Front seat occupants must be restrained. Rear-seat occupants must wear a belt if available. All vehicles post-1979 have rear seat belts.
3. **Exemptions** - Taxi drivers and frequently stopping delivery vehicles.
4. **Penalties** - 75 dollar fine.

<b>SEAT BELT WEARING SURVEY</b>	<b>Cars</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Country: NORWAY</b>					
<b>Children</b> 0 to 14	Yes <sup>1</sup> Yes <sup>1</sup>				
<b>Adults (15 and over)</b>	Yes <sup>1</sup>				
<b>Road Type:</b> Motorways Rural Roads Urban Roads	No Yes Yes				
<b>Gender of occupants</b>	No				
<b>Seating Position:</b> Drivers Front seat passenger Rear seat passengers	Yes No Yes				

<sup>1</sup> Cars, taxis and light vans.

1. Roadside observation. Two sites (1 built up, 1 non built up) in each of 7 counties.
2. **Legislation** - Seat belts required to be fitted in cars and light vans. Since 1971 in front seats; since 1984 in back seats. Seat belts required to be used, by occupants over 15 years, in front seats since 1975, and in back seats since 1985 where fitted. Since 1988, it is a requirement to use seat belts in all motor vehicles where fitted, including trucks buses and vans. Children under 15 must also use approved safety devices and/or seat belts. Since 1991, seat belts are required to be fitted in the most unprotected seats in tourist buses (coaches).
3. **Exemptions** - Taxi drivers. Postal delivery. Garbage collection. Stationary car. Reversing. Driving in a garage, parking areas, petrol station etc. Medical reasons confirmed by a doctor.
4. **Penalties** - Fine 500 NKR.

<b>SEAT BELT WEARING SURVEY</b> <b>Country: PORTUGAL</b>	<b>Cars</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Children</b>					
<b>Adults</b>					
<b>Road Type:</b> Motorways Rural Roads Urban Roads					
<b>Gender of occupants</b>					
<b>Seating Position:</b> Drivers front seat passenger Rear seat passengers					

1. There is no official survey of seat belt wearing in Portugal.
2. **Legislation** - For front and rear seats, seat belt wearing is compulsory, on both urban and non - rural roads, when they are fitted.
3. **Exemptions** - Allowed for professional or medical reasons.
4. **Penalties** - Fines from 10 000 to 50 000 PTE.

<b>SEAT BELT WEARING SURVEY</b>	<b>Cars</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Country: SPAIN</b>					
<b>Children</b>					
0 to 4 years	Yes				
5 to 12 years	Yes				
<b>Adults</b> Over 12 years	Yes				
<b>Road Type:</b>					
Motorways	Yes				
Rural Roads					
Urban Roads	Yes				
<b>Gender of occupants</b>	Yes				
<b>Seating Position:</b>					
Drivers	Yes				
Front seat passenger	Yes				
Rear seat passengers	Yes				

1. Roadside observation. First survey covering cars only. New survey 1995. Last survey 1996.
2. **Legislation** - Obligatory for driver and all passengers in cars, and in other vehicles less than 3 500 kgs carrying people and/or goods. Also obligatory for the driver and front seat passenger in light goods vehicles less than 3 500 kgs, and in passenger carrying vehicles with more than eight passenger seats less than 5 000 kgs.
3. **Exemptions** - Drivers reversing or parking. Rear seat passengers under 12 years of age. Drivers and passengers over 12 years of age but under 1.5 metres in height. Expectant mothers with a medical certificate. Medical reasons. On urban roads only - taxi drivers carrying passengers. Drivers of goods vehicles loading and unloading. Drivers and passengers in emergency vehicles. Passengers accompanying a driver learning to drive.
4. **Penalties** - Fine 15 000 pesetas

<b>SEAT BELT WEARING SURVEY</b>	<b>Cars</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Country: SWEDEN</b>					
<b>Children</b> Under 15 years	Yes				
<b>Adults</b> (Over 15 years)	Yes				
<b>Road Type:</b> Motorways Rural Roads Urban Roads	Yes Yes Yes				
<b>Gender of occupants</b>					
<b>Seating Position:</b> Drivers Front seat passenger Rear seat passengers	Yes Yes Yes				

1. Roadside observation and questionnaire. 12 sampling sites producing a total sample of 70 000 cars.
2. **Legislation** - All seats in passenger cars must be fitted with a seat belt, and used.
3. **Exemptions** - Taxi drivers.
4. **Penalties** - Fine 300 SKR.

<b>SEAT BELT WEARING SURVEY</b>	<b>Cars</b>	<b>Taxis</b>	<b>Light Vans</b>	<b>Buses and Coaches</b>	<b>Heavy Goods Vehicles</b>
<b>Country: UNITED STATES</b>					
<b>Children</b>					
Less than 1	Yes		Yes		
1 to 4	Yes		Yes		
5 to 15	Yes		Yes		
16 to 24	Yes		Yes		
<b>Adults (25 and older)</b>	Yes		Yes		
<b>Road Type:</b>					
Motorways	Yes		Yes		
Rural Roads	Yes		Yes		
Urban Roads	Yes		Yes		
<b>Gender of occupants</b>	Yes*		Yes*		
<b>Seating Position:</b>					
Drivers	Yes		Yes		
Front seat passenger	Yes		Yes		
Rear seat passenger	No		No		

\* Over 4 years old.

1. Each state (with one exception) and the District of Columbia conduct their own surveys. National survey conducted in 1994 (National Occupant Protection Use Survey). Roadside observation: 4 000 random sites half on major roads, half on local roads. 30 minute observations at each site provided a sample of 167 000 cars and 84 000 light trucks.
2. **Legislation** - No national law. Individual states and District of Columbia have safety belt laws which vary according to vehicle and occupant. All states and DC have child restraint laws, but age coverage differs from state to state.
3. **Exemptions** - Vary according to state. Typical exemptions: older vehicles with no seat belts fitted, medical grounds, emergency vehicles, insufficient seating positions, pick up trucks.
4. **Penalties** - Vary according to state. Fines range up to \$50.

# **APPENDIX B**

## **Seat Belt Data Quality for Car Drivers (1996 Survey)**

### **CONTENTS**

**A) Survey Form**

**B) List of Responding Countries**

**C) Respondent Details**

## ***SURVEY FORM***

Dear Colleague,

I attach for your information a copy of a paper about the general availability of seat belt wearing data in OECD Member countries. At the recent (14th) meeting of the IRTAD Operational Committee, it was agreed that it would be a useful exercise to follow-up this paper with a quick exercise to establish the possibility of supplying data for the wearing of seat belts to IRTAD. The recent survey of data availability shows that there are significant differences, not only in coverage, but also in sampling procedures and data periodicity which will affect the comparability of data between countries.

Nevertheless, the survey shows that most countries claim to produce national data for the wearing of seat belts for car drivers which can be analysed by road type, which if produced on a more or less comparable basis might be a useful data addition to IRTAD. For this category of data only, I would be grateful if you could provide the following specific information by the end of May.

**Peter Wilding  
Road Accident Statistics Branch  
Romney House  
Room B646  
43, Marsham Street  
London SW1  
Telephone +44 171 276 8775  
Fax +44 171 276 8269**

**Seat Belt Wearing Data for Car Drivers in Cars on:**  
**Motorways**  
**Rural Roads**  
**Urban roads**

1. Please provide seat belt wearing rates for 1994, or the latest year (please specify) for which data are available.

Motorways  
Rural Roads  
Urban Roads

2. What is the periodicity of this data (e.g. Quarterly, Annual, Biennial, Occasional)?

Motorways  
Rural Roads  
Urban Roads

3. How far back is data available?

Motorways  
Rural Roads  
Urban Roads

4. Is this data based upon roadside observation, questionnaire, or both.

Motorways  
Rural Roads  
Urban Roads

5. A) For the latest available information, if based on road side observation how many sampling sites (counting points) were there on each road type?

Motorways  
Rural Roads  
Urban Roads

B) For the latest available information, if based on questionnaires or telephone surveys, how many respondents were there?

6. How many cars on average were sampled at each road observation site for the latest data supplied in response to question 1?

	<b>Number of sites</b>	<b>Average count of cars at each site</b>	<b>Total sample of cars</b>
<b>Motorways</b>			
<b>Rural Roads</b>			
<b>Urban Roads</b>			

7. A) For the range of data available from roadside observation counts, if the sample size varies significantly between years please provide information for those years where the sample size was a maximum and a minimum.

	<b>YEAR:</b>
--	--------------

	Maximum Sample Size		Minimum Sample Size	
	Number of sites	Total sample of cars	Number of sites	Total sample of cars
<b>Motorways</b>				
<b>Rural Roads</b>				
<b>Urban Roads</b>				

B) For the range of data available from questionnaires or telephone contacts, if the sample size varies significantly between years, please provide information for those years where the sample size was a maximum and a minimum.

Number of questionnaires/ telephone contacts	YEAR: Maximum Sample Size	YEAR: Minimum Sample Size

***QUALITY OF SEAT BELT WEARING DATA FOR CAR DRIVERS***

***(SUPPLEMENTARY SURVEY)***

**Respondent countries**

**Austria**  
**Canada**  
**Czech Republic**  
**Denmark**  
**Finland**  
**France**  
**Germany**  
**Great Britain**  
**Hungary**  
**Iceland**  
**Japan**  
**Netherlands**  
**Norway**  
**Portugal**  
**Spain**  
**Sweden**  
**Unites States**

**RESPONDENT DETAILS**

**CAR DRIVER SEAT BELT WEARING DATA**

Reply  
 No Reply

	AUSTRALIA	AUSTRIA	CANADA	CZECH REPUBLIC	DENMARK	FINLAND	FRANCE
<b>1. Wearing rates</b>		<b>1995</b>	<b>1995</b>	<b>1995</b>	<b>1993</b>	<b>1995</b>	<b>1995</b>
Motorways		77.5%	None	71%	84%	] 93%	96%
Rural roads		77.9%	None	62%	78%	] ]	92%
Urban roads		66.3%	91.6%	32%	60%	82%	70%
<b>2. Periodicity</b>							
Motorways		Quarterly from	None	Occasional	Occasional	Annual	3 times a
Rural roads		1995	None			] ]	year
Urban roads		3 surveys in 1994	Annually				
<b>3. Data availability from:</b>							
Motorways		1993	None	1995		] 1966	Tri-ennial since
Rural roads		(Data based on	None	1995	1975	] ]	1988. Annually: -
Urban roads		small samples	1979	1995	1975	1968	Urban (1980) Rural
		from 1983 to 1989)					( 1972)
<b>4. Basis of data collection:</b>							
Motorways		Roadside	None	Roadside	Roadside	Roadside	Roadside
Rural roads		Observation	None	observation	observation	observation	observation
Urban roads			Roadside				
			observation				

] or ] ] : Denotes combinations of road types  
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# CAR DRIVER SEAT BELT WEARING DATA

Reply  
 No Reply

	GERMANY	GREAT BRITAIN	GREECE	HUNGARY	ICELAND	JAPAN
<b>1. Wearing rates</b>	<b>1995</b>	<b>1995</b>		<b>1995</b>	<b>1995</b>	<b>1995</b>
<b>Motorways</b>	West 96% East 97%	None	No data available	62.4%	No Motorways	91.2%
<b>Rural roads</b>	92% 94%	94%		58.6%	Yes ]	82.9% ]
<b>Urban roads</b>	86% 85%	91%		48.2%	Yes ]	]
<b>2. Periodicity</b>	<b>West East</b>					<b>Twice Yearly</b>
<b>Motorways</b>	Annual	Twice a year (April + October)		Annual from 1992 to 1995	None Annual Annual	]
<b>Rural roads</b>						]
<b>Urban roads</b>						]
<b>3. Data availability from:</b>	<b>West East</b>					<b>1986</b>
<b>Motorways</b>	1985 1991	None		Since 1992	None	]
<b>Rural roads</b>		1982			1985	]
<b>Urban roads</b>		1982			1985	]
<b>4. Basis of data collection:</b>	<b>West East</b>					<b>Roadside observation</b>
<b>Motorways</b>	Roadside observation	Roadside observation		Roadside observation stationary + mobile	None roadside observation	]
<b>Rural roads</b>						]
<b>Urban roads</b>						]

] or ] : Denotes combinations of road types  
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# CAR DRIVER SEAT BELT WEARING DATA

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 No Reply

	NETHERLANDS	NEW ZEALAND	NORWAY	PORTUGAL	SPAIN	SWEDEN	UNITED STATES
<b>1. Wearing rates</b>	<b>1995</b>		<b>1995</b>		<b>1995</b>	<b>1995</b>	<b>1994</b>
Motorways	78%		None		] Yes	95.3%	69.3%
Rural roads	75%		85.4%		] Yes	89.1%	57.6%
Urban roads	64%		72.3%		Yes	86.2%	59.2%
<b>2. Periodicity</b>							
Motorways	Annual from 1989 to 1992.		Annual		] Occasional	Annual 1994 to 1996	Data for 1994 only.
Rural roads	Then 1995 only.				] Occasional	From 1983 available	Next data planned for 1997.
Urban roads							
<b>3. Data availability from:</b>							
Motorways	Annual from 1989 to 1992.		None		] 1992 +1995	Since 1983	1994
Rural roads	Then 1995 only		1973		] 1992 +1995		
Urban roads			1973				
<b>4. Basis of data collection:</b>							
Motorways	Roadside observation		Roadside observation		Observation + questionnaire	Roadside observation	Roadside observation
Rural roads					] Observation + questionnaire		
Urban roads					] Observation + questionnaire		

] or ] : Denotes combinations of road types  
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# CAR DRIVER SEAT BELT WEARING DATA

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	AUSTRALIA	AUSTRIA	CANADA	CZECH REPUBLIC	DENMARK	FINLAND	FRANCE	
<b>5A. How many sampling sites (roadside observation)</b> Motorways Rural roads Urban roads		32	None	4	15	]100 approx.	3 times a year	
		32	None	4	21	] ]	42	
		40	240	4	26	Unknown	126	
							44	
<b>5B. How many respondents (Questionnaire or telephone survey)</b> Motorways Rural roads Urban roads		Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	
<b>6. How many cars sampled at each site (average)</b> Motorways Rural roads Urban roads		246	None	440	250	] 150	120	
		256	None	295	250	] ]	95	
		349	375	334	140	180	280	
<b>7A. Min Max Car sample (roadside observation)</b> Motorways Rural roads Urban roads		Min (1993) 1,440	Max (1994) 17,698	Min (79-90) 50,000	Max (91-95) 90,000	Little variation in new survey	Min (1993) 3604	Max (1985) 5352
		1,643	36,208			Total sample = 4282	Min (1968) ] 2300	Max (1993) 17489
		17,749	80,912				] ]	No variation since 1983.
							2971	45074
							(1968)	(1975)
								14,950
								35,450
								37,200
<b>7B. Min Max Contacts (Questionnaire/telephone)</b> Motorways Rural roads Urban roads		Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

] or ] : Denotes combinations of road types  
 ] ]  
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# CAR DRIVER SEAT BELT WEARING DATA

Reply  
 No Reply

	GERMANY		G. BRITAIN	GREECE	HUNGARY	ICELAND	JAPAN
<b>5A. How many sampling sites (roadside observation)</b> Motorways Rural roads Urban roads	West 4 4 12-16	East 4 4 12-16	2 times a year  None 20 20		2 4 to 5 4	No Motorways 24 32	2 times a year  100 ] 1000 ]
<b>5B. How many respondents (Questionnaire or telephone survey)</b> Motorways Rural roads Urban roads	West  Not applicable	East  Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
<b>6. How many cars sampled at each site (average)</b> Motorways Rural roads Urban roads	1400 1200 700 to 525	1400 1200 700 to 525	None 550 (approx.) 550 (approx.)		1,900 <sup>1</sup> 950 (max) 930	None 22 36	600 ] 300 ]
<b>7A. Min Max Car sample (roadside observation)</b> Motorways Rural Roads Urban Roads	No variation (1995) 5600 4800 8400	significant variation (1995) 5600 4800 8400	No significant variation (1995) Total sample 40000 approx.		Min (1994) 3600 3450 3780 Max (1995) 3760 3810 3710	Min None ] 1516 2652 ]	No significant variation  120,000 ] 600,000 ]
<b>7B. Min Max Contacts (Questionnaire/ telephone)</b> Motorways Rural roads Urban roads	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable

] or ] : Denotes combinations of road types  
]

1) Including mobile observations (Hungary)



## CAR DRIVER SEAT BELT WEARING DATA

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	NETHERLANDS	NEW ZEALAND	NORWAY	PORTUGAL	SPAIN	SWEDEN	UNITED STATES
<b>5A. How many sampling sites (roadside observation)</b> Motorways Rural roads Urban roads	12 12 24		None 7 7	No data available	] 50 ] 50	1 roundabout 3 roundabouts 7 roundabouts (2 to 3 observers at each site)	630 535 424
<b>5B. How many respondents (Questionnaire or telephone survey)</b> Motorways Rural roads Urban roads	Not applicable		Not Applicable		20,874	Not Applicable	Not applicable
<b>6. How many cars sampled at each site (average)</b> Motorways Rural roads Urban roads	400 400 400		None 1100 1150		] 235 ] 182	7000 per r'about 5000 per r'about 6000 per r'about	31 14 25
<b>7A. Min Max Car sample (roadside observation)</b> Motorways Rural roads Urban roads	Not applicable (No variation)  Total sample = 19,000		Not available  Total sample = 15966		Min (1992) ] 590 ] 900  Max (1995) 11,764 9,110	7000 4000 to 7000 2000 to 14000 per roundabout	Data only for 1994. next survey 1997. Total sample 35,000 approx.
<b>7B. Min Max Contacts (Questionnaire/ telephone)</b> Motorways Rural roads Urban roads	Not applicable		Not applicable		Min (1992) 1,490  Max (1995) 20,874		Not applicable

] or ] : Denotes combinations of road types  
 ] ]